



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2020-0789; Project Identifier AD-2020-00849-T; Amendment 39-21519; AD 2021-09-06]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2019-22-10, which applied to all The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes. AD 2019-22-10 required repetitive inspections for cracking of the left- and right-hand side outboard chords of frame fittings and failsafe straps at a certain station around eight fasteners, and repair if any cracking is found. For certain airplanes, this AD reduces the compliance time for the initial inspection, and for all airplanes this AD reduces the repetitive interval. This AD was prompted by a determination that the initial inspection threshold and repetitive inspection interval are inadequate to address the cracking in a timely manner. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain other publication listed in this AD as of November 13, 2019 (84 FR 61533, November 13, 2019).

The Director of the Federal Register approved the incorporation by reference of a certain other publication listed in this AD as of October 3, 2019 (84 FR 52754, October 3, 2019).

ADDRESSES: For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet <https://www.myboeingfleet.com>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-0789.

Examining the AD Docket

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-0789; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Greg Rutar, Aerospace Engineer, Airframe Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3529; email: Greg.Rutar@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2019-22-10, Amendment 39-19789 (84 FR 61533, November 13, 2019) (AD 2019-22-10). AD 2019-22-10 applied to all The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes. The NPRM published in the *Federal Register* on September 8, 2020 (85 FR 55391). The NPRM was prompted by an engineering analysis of the inspection reporting results and metallurgical evaluation of the submitted frame fitting assemblies, which indicated that the initial inspection threshold for Model 737-900ER series airplanes and the repetitive inspection interval for all affected airplanes are inadequate to address the cracking in a timely manner. For certain airplanes, the NPRM proposed to reduce the compliance time for the initial inspection, and for all airplanes the NPRM proposed to reduce the repetitive inspection interval.

Comments

The FAA gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM and the FAA's response to each comment.

Request to Extend the Compliance Time for the Reporting Requirement

American Airlines (AA) asked that the compliance time for the reporting requirements in paragraphs (h) and (k) of the proposed AD be extended to 30 days after the date of inspection. AA stated that the cracking of the station (STA) 663.75 fitting is now a known problem, and Boeing has been receiving reports for almost a year. AA added that extending the reporting requirement to 30 days would provide relief to the operators while not decreasing safety. Hainan Airlines (HNA) recommended that the compliance time for the reporting requirement in paragraph (k) of the proposed AD be

extended from 3 to 30 days after the inspection or after the effective date of the proposed AD, or an equivalent date, to alleviate the burden on operators. HNA believes that Boeing already received a large number of inspection reporting results for its root cause analysis over the past year.

Southwest Airlines (SWA) asked that the compliance time for the reporting requirement be extended to 10 days. SWA stated that the 3-day reporting requirement was developed for AD 2019-20-02, Amendment 39-19755 (84 FR 52754, October 3, 2019). SWA added that the inspection program has matured within Boeing and the Model 737-600, -700, -700C, -800, -900, and -900ER operators, and the reporting requirement of initial inspections can be relaxed from 3 to 10 days to reduce the burden on airline operations for reporting non-crack findings. Additionally, SWA noted that Boeing's airworthiness limitation (Document D626A001-9-01) has a requirement to report any crack found during these inspections to Boeing within 10 days.

AIRDO Airlines asked that the reporting requirement be changed from 3 to 7 days, since the statistical data of the inspection results for most of the aging 737NG airplanes has been reported.

Boeing stated that it has been receiving inspection reports over the past year and has accumulated substantial data, and asked that the reporting requirement be extended to 10 days.

Because of the information available from the inspection findings that have already been reported to Boeing, the FAA agrees to extend the reporting requirements in paragraphs (h) and (k) of this AD to 10 days, which would reduce the reporting burden on operators and would provide an acceptable level of safety. However, Boeing and the FAA are still relying on those inspection results both to provide repair instructions when cracks are found and to better understand the nature, cause, and extent of the cracking

and ultimately develop a terminating action. The FAA, therefore, does not agree to extend the reporting requirement to 30 days.

Request to Provide Credit for Previous Reporting Requirement

Boeing and AIRDO Airlines asked that reporting as specified in paragraph (k) of the proposed AD not be required if an inspection report was previously submitted in accordance with AD 2019-20-02 or AD 2019-22-10.

The FAA partially agrees with the commenters' request. Although reporting per AD 2019-20-02 alone is not adequate for credit with the reporting requirement specified in paragraph (k) of this AD, reporting per AD 2019-22-10 meets the reporting requirement specified in paragraph (k) of this AD. Therefore, the FAA has revised paragraph (k) of this AD to specify that a report submitted as required in paragraph (h) of this AD is acceptable for compliance with the requirements of paragraph (k) of this AD.

Request to Clarify Reporting Requirement

One commenter asked that the reporting requirement in paragraph (k) of the proposed AD be clarified. The commenter stated that inspection report example specified in Boeing Multi-Operator Message MOM-MOM-20-0443-01B (R1), dated June 2, 2020, has columns for repetitive inspections. The commenter noted that reporting findings only for the initial inspection is required by the proposed AD, and would like conformation that reporting findings for repetitive inspections thereafter is not required if no cracks are found.

The FAA acknowledges the commenter's concern and confirms that paragraph (k) of this AD requires reporting findings for only the initial inspection, and no reporting is required for any repetitive inspection regardless of the findings.

Effects of Winglets on Accomplishment of the Proposed Actions

Aviation Partners Boeing, SWA, and HNA stated that the installation of blended or split scimitar winglets per Supplemental Type Certificate (STC) ST00830SE does not affect compliance with the proposed actions.

The FAA agrees with the commenters that STC ST00830SE does not affect the accomplishment of the manufacturer's service instructions. Operators of airplanes with these winglets do not need to request a "change in product" alternative method of compliance (AMOC) approval as specified in 14 CFR 39.17. The FAA has redesignated paragraph (c) of the proposed AD as paragraph (c)(1) of this AD, and added paragraph (c)(2) to this AD accordingly.

Request to Use Figures to Accomplish the Refined Inspection

AA asked that it be allowed to use the figures for the refined inspection areas in FAA Letter 782-19-14004. AA stated that the global AMOC provided in FAA Letter 782-19-14004 and Boeing Multi-Operator Message MOM-MOM-19-0536-01B, dated September 30, 2019, is referenced in Boeing Multi-Operator Message MOM-MOM-20-0443-01B (R1), dated June 2, 2020; however, it is not mentioned in the proposed AD.

The FAA partially agrees with the commenter's request. Paragraph (n)(5) of this AD states that AMOCs approved previously for AD 2019-22-10, which include the referenced global AMOC, are approved as AMOCs for the corresponding provisions of this AD. Therefore, no change to this AD is necessary regarding this issue.

Request for Correction of Typographical Error

Boeing and HNA requested the FAA correct a typographical error for the effective date of AD 2019-22-10, which is referenced in paragraph (h)(1) of the proposed AD as October 3, 3019, when the correct date is October 3, 2019.

The FAA agrees with the commenters' request. The FAA has corrected the effective date of AD 2019-22-10 in paragraph (h)(1) of this AD accordingly.

Conclusion

The FAA reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD with the changes described previously, and minor editorial changes. The FAA has determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

The FAA also determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

Related Service Information under 1 CFR Part 51

The FAA reviewed Boeing Multi-Operator Message MOM-MOM-20-0443-01B (R1), dated June 2, 2020. This service information specifies procedures for repetitive detailed inspections for cracking of the left- and right-hand outboard chords of the STA 663.75 frame fittings and failsafe straps around eight fasteners adjacent to the stringer S-18A straps.

This AD also requires Boeing Multi-Operator Message MOM-MOM-19-0623-01B, dated November 5, 2019, which the Director of the Federal Register approved for incorporation by reference as of November 13, 2019 (84 FR 61533, November 13, 2019).

This AD also requires Boeing Multi-Operator Message MOM-MOM-19-0536-01B, dated September 30, 2019, which the Director of the Federal Register approved for incorporation by reference as of October 3, 2019 (84 FR 52754, October 3, 2019).

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Interim Action

The FAA considers this AD interim action. The inspection reports that are required by this AD will enable the manufacturer to obtain better insight into the nature, cause, and extent of the cracking, and eventually to develop final action to address the unsafe condition. Once final action has been identified, the FAA might consider further rulemaking.

Costs of Compliance

The FAA estimates that this AD affects 1,911 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection (retained action from AD 2019-22-10)	1 work-hour X \$85 per hour = \$85 per inspection cycle	\$0	\$85 per inspection cycle	\$162,435 per inspection cycle
Reporting (retained action from AD 2019-22-10)	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$162,435
Inspection (new action)	1 work-hour X \$85 per hour = \$85 per inspection cycle	\$0	\$85 per inspection cycle	\$162,435 per inspection cycle
Reporting (new action)	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$162,435

The FAA has received no definitive data that would enable the agency to provide cost estimates for the on-condition actions specified in this AD.

Paperwork Reduction Act

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to penalty for failure to comply with a collection

of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB control number. The control number for the collection of information required by this AD is 2120-0056. The paperwork cost associated with this AD has been detailed in the Costs of Compliance section of this document and includes time for reviewing instructions, as well as completing and reviewing the collection of information. Therefore, all reporting associated with this AD is mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177-1524.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA has determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on

the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

(1) Is not a “significant regulatory action” under Executive Order 12866,

(2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by:

a. Removing Airworthiness Directive 2019-22-10, Amendment 39-19789 (84 FR 61533, November 13, 2019); and

b. Adding the following new airworthiness directive:

2021-09-06 The Boeing Company: Amendment 39-21519; Docket No. FAA-2020-0789; Project Identifier AD-2020-00849-T.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2019-22-10, Amendment 39-19789 (84 FR 61533, November 13, 2019) (AD 2019-22-10).

(c) Applicability

(1) This AD applies to all The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes, certificated in any category.

(2) Installation of Supplemental Type Certificate (STC) ST00830SE does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes on which STC ST00830SE is installed, a “change in product” alternative method of compliance (AMOC) approval request is not necessary to comply with the requirements of 14 CFR 39.17.

(d) Subject

Air Transport Association (ATA) of America Code 53, Fuselage.

(e) Unsafe Condition

This AD was prompted by reports of cracking discovered in the station (STA) 663.75 frame fitting outboard chords and failsafe straps adjacent to the stringer S-18A straps and a determination that the initial inspection threshold for certain airplanes and the repetitive inspection interval specified in AD 2019-22-10 are inadequate to address the cracking in a timely manner. The FAA is issuing this AD to address cracking in the STA 663.75 frame fitting outboard chords and failsafe straps adjacent to the stringer S-18A straps, which could result in failure of a Principal Structural Element (PSE) to sustain limit load. This condition could adversely affect the structural integrity of the airplane and result in loss of control of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Retained Inspection and Corrective Action, with No Changes

This paragraph restates the requirements of paragraph (g) of AD 2019-22-10, with no changes. At the earlier of the times specified in paragraphs (g)(1) and (2) of this AD: Do a detailed inspection for cracking of the left- and right-hand side outboard chords of the STA 663.75 frame fittings and failsafe straps adjacent to the stringer S 18A straps, in accordance with Boeing Multi-Operator Message MOM-MOM-19-0536-01B, dated September 30, 2019. If any crack is found, repair before further flight using a method approved in accordance with the procedures specified in paragraph (n) of this AD. Repeat the inspection thereafter at intervals not to exceed 3,500 flight cycles until the initial inspection required by paragraph (i) of this AD is done.

(1) Prior to the accumulation of 30,000 total flight cycles, or within 7 days after October 3, 2019 (the effective date of AD 2019-20-02, Amendment 39-19755 (84 FR 52754, October 3, 2019) (AD 2019-20-02)), whichever occurs later.

(2) Prior to the accumulation of 22,600 total flight cycles, or within 1,000 flight cycles after October 3, 2019 (the effective date of AD 2019-20-02), whichever occurs later.

(h) Retained Reporting Requirement, with No Changes

This paragraph restates the requirements of paragraph (h) of AD 2019-22-10, with no changes. At the applicable time specified in paragraph (h)(1) or (2) of this AD, submit a report of all findings, positive and negative, of the initial inspection required by paragraph (g) of this AD. Submit the report in accordance with Boeing Multi-Operator Message MOM-MOM-19-0536-01B, dated September 30, 2019.

(1) If the inspection was done on or after October 3, 2019 (the effective date of AD 2019-20-02): Submit the report within 10 days after the inspection.

(2) If the inspection was done before October 3, 2019 (the effective date of AD 2019-20-02): Submit the report within 10 days after October 3, 2019.

(i) Inspection and Corrective Action with Reduced Compliance Times

Except as specified in paragraph (j) of this AD: At the applicable initial compliance time specified in Tables 1 and 2 of “Ref I” of Boeing Multi-Operator Message MOM-MOM-20-0443-01B (R1), dated June 2, 2020, do a detailed inspection of the left- and right-hand side outboard chords of the STA 663.75 frame fittings and failsafe straps around eight fasteners adjacent to the stringer S-18A straps, in accordance with Boeing Multi-Operator Message MOM-MOM-20-0443-01B (R1), dated June 2, 2020. If any crack is found, repair before further flight using a method approved in accordance with the procedures specified in paragraph (n) of this AD. Repeat the inspection thereafter at the applicable intervals specified in Tables 1 and 2 of “Ref I” of Boeing Multi-Operator Message MOM-MOM-20-0443-01B (R1), dated June 2, 2020. Accomplishing the initial inspection required by this paragraph or an initial inspection specified in Boeing Multi-Operator Message MOM-MOM-19-0623-01B, dated November 5, 2019, terminates the inspections required by paragraph (g) of this AD.

(j) Exceptions to Service Information Specifications

Where Boeing Multi-Operator Message MOM-MOM-20-0443-01B (R1), dated June 2, 2020, uses the phrase “the original issue date of MOM-MOM-20-0443-01B(R1),” this AD requires using “the effective date of this AD.”

(k) New Reporting Requirement

At the applicable time specified in paragraph (k)(1) or (2) of this AD, submit a report of all findings, positive and negative, of the initial inspection required by paragraph (i) of this AD. Submit the report in accordance with MOM-MOM-20-0443-01B (R1), dated June 2, 2020. A report submitted as specified in paragraph (h) of this AD is acceptable for compliance with the requirements of this paragraph.

(1) If the inspection was done on or after the effective date of this AD: Submit the report within 10 days after the inspection.

(2) If the inspection was done before the effective date of this AD: Submit the report within 10 days after the effective date of this AD.

(l) Special Flight Permit

Special flight permits may be issued in accordance with 14 CFR 21.197 and 21.199 to operate the airplane to a location where the airplane can be repaired if any crack is found, provided the Manager, Seattle ACO Branch, FAA, concurs with issuance of the special flight permit. Send requests for concurrence by email to 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(m) Paperwork Reduction Act Burden Statement

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting for this collection of information is estimated to be approximately 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory as required by this AD. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177-1524.

(n) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (o) of this AD. Information may be emailed to:

9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by The Boeing Company Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO Branch, FAA, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) AMOCs approved previously for AD 2019-20-02 are approved as AMOCs for the corresponding provisions of this AD.

(5) AMOCs approved previously for AD 2019-22-10 are approved as AMOCs for the corresponding provisions of this AD.

(o) Related Information

For more information about this AD, contact Greg Rutar, Aerospace Engineer, Airframe Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3529; email: Greg.Rutar@faa.gov.

(p) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(3) The following service information was approved for IBR on [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(i) Boeing Multi-Operator Message MOM-MOM-20-0443-01B (R1), dated June 2, 2020.

(ii) [Reserved]

(4) The following service information was approved for IBR on November 13, 2019 (84 FR 61533, November 13, 2019).

(i) Boeing Multi-Operator Message MOM-MOM-19-0623-01B, dated November 5, 2019.

(ii) [Reserved]

(5) The following service information was approved for IBR on October 3, 2019 (84 FR 52754, October 3, 2019).

(i) Boeing Multi-Operator Message MOM-MOM-19-0536-01B, dated September 30, 2019.

(ii) [Reserved]

(6) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet <https://www.myboeingfleet.com>.

(7) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(8) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fedreg.legal@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on April 15, 2021.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

[FR Doc. 2021-08849 Filed: 5/3/2021 8:45 am; Publication Date: 5/4/2021]